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10/613,103	07/07/2003	Hua Autumn Liu	29250-001018/US	4245

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CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC
ATTN: JOHN CURTIN
P.O. BOX 1995
VIENNA, VA 22183

EXAMINER
RUSSELL, WANDA Z

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/613,103	LIU, HUA AUTUMN	
	Examiner	Art Unit	
	Wanda Z. Russell	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. In P. 1, [0004], line 4, the application number 10163104 needs to be filled to replace the blank.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpini et al. (Pub No. US 2003/0063613), in view of Enoki et al. (US patent 6,895,008 B2).

Regarding **claim 1**, Carpini et al. substantially disclose a system (Title) for re-routing traffic ([0039], line 8) comprising:

an originating network device (Fig. 1) operable to:

re-route traffic ([0039], line 8) traveling in a forward direction to an alternate path (21-Fig. 1, and [0039], lines 1-3) in the forward direction; and

transmit a switch over message (signal, [0047], line 17 & lines 15-19. It is obvious that both signal of fault detection and switch over message lead to alternative path, and the reason of switching over is either fault or heavy traffic, and they are analogous) along the alternate path in the forward direction to a merging network device

(9-Fig. 1) responsible for re-routing traffic traveling in a backward direction to the alternate path in the backward direction (21-Fig. 1, bi-directional, and [0039], lines 1-6).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 2**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1). In addition, Carpini et al. disclose the system of claim 1, wherein the originating network device is further operable to transmit a second message, along the alternate path in the forward direction, to the merging network device to allow traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected (3, 21-Fig. 1, bi-directional, and "restoration", [0047], lines 1-5).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 3**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1). In addition, Carpini et al. disclose the system of claim 1, wherein the originating network device is a multi-protocol label switched (MPLS) device ([0034], line 4).

Regarding **claim 4**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1).

However, Carpini et al. fail to specifically teach that the bi-directional LSP is comprised of an LSP carrying traffic in the forward direction and another LSP carrying traffic in the backward direction.

Enoki et al. teach that the bi-directional LSP is comprised of an LSP carrying traffic in the forward direction (up direction LSP, col. 4, line 66) and another LSP carrying traffic in the backward direction (down direction LSP, col. 5, line 6. Also col. 4, line 66-col. 5, line 7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 5**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1). In addition, Carpini et al. disclose the system of claim 1 further comprising a merging network device operable to receive the switch over message and to re-route traffic traveling along the bi-directional LSP in the backwards

direction to the alternate path in the backwards direction based on the switch over message (21-Fig. 1, bi-directional, and [0039], lines 1-3, & [0047], lines 15-19).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 6**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1 and 5). In addition, Carpini et al. disclose the system of claim 5, wherein, the merging network device is further operable to:

receive a second message ("restoration", [0047], lines 1-5) along the alternate path in the forward direction; and

allow traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected based on said second message (21-Fig. 1, bi-directional).

Regarding **claim 7**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1 and 5). In addition, Carpini et al. disclose the system of claim 5 wherein the merging network device is a MPLS device ([0034, line 4).

Regarding **claim 8**, Carpini et al. substantially disclose a merging network device (9-Fig. 1) operable to:

receive a switch over message (signal, [0047], line 17 & lines 15-19. It is obvious that both signal of fault detection and switch over message lead to alternative path, and the reason of switching over is either fault or heavy traffic, and they are analogous); and

re-route traffic traveling along a bi-directional LSP in a backwards direction to an alternate path in the backwards direction based on the switch over message (21-Fig. 1, bi-directional).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 9**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 8). In addition, Carpini et al. disclose the device as in claim 8 further operable to:

receive a second message ("restoration", [0047], lines 1-5) along the alternate path in the forward direction; and

allow traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected based on said second message (3, 21-Fig. 1, bi-directional, and "restoration", [0047], lines 1-5).

Regarding **claim 10**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 8). In addition, Carpini et al. disclose the device of claim 8 wherein, the merging network device is a MPLS device ([0034], line 4).

Regarding **claim11-15**, they are method claims of claims 1, 2, 4, 8, and 9 respectively. Therefore they are rejected for the same reason above.

Regarding **claim16-17**, they are method claims of claims 8, and 9 respectively. Therefore they are rejected for the same reason above.

Regarding **claim 18**, Carpini et al. substantially disclose a system (Title) for re-routing traffic ([0039], line 8) comprising:

an originating network device (Fig. 1) comprising:

means (routers, 7-Fig. 1) for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path (21-Fig. 1, and [0039], lines 1-3) in the forward direction; and

means (9-Fig. 1) for transmitting a switch over message along the alternate path in the forward direction to a merging network device (9-Fig. 1) responsible for re-routing traffic traveling along the bi-directional LSP in a backward direction to the alternate path in the backward direction (21-Fig. 1, bi-directional, and [0039], lines 1-6).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the

invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 19**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 18). In addition, Carpini et al. disclose the system of claim 18, wherein the originating network device further comprises means (9-Fig. 1, and [0047], lines 1-5) for transmitting a second message ("restoration", [0047], line 1), along the alternate path in the forward direction, to the merging network device to allow traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected (3, 21-Fig. 1, bi-directional, and [0051], lines 1-5).

Regarding **claim 20**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 18).

However, Carpini et al. fail to specifically teach that the bi-directional LSP is comprised of an LSP carrying traffic in the forward direction and another LSP carrying traffic in the backward direction.

Enoki et al. teach that the bi-directional LSP is comprised of an LSP carrying traffic in the forward direction (up direction LSP, col. 4, line 66) and another LSP carrying traffic in the backward direction (down direction LSP, col. 5, line 6. Also col. 4, line 66-col. 5, line 7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 21**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1). In addition, Carpini et al. disclose the system of claim 1 further comprising a merging network device which comprises means (71-Fig. 4, [0054], lines 4-12) for receiving the switch over message (signal, [0047], lines 15-19) and means for re-routing traffic traveling along the bi-directional LSP in the backwards direction to the alternate path in the backwards direction based on the switch over message (21-Fig. 1, bi-directional, and [0039], lines 1-3, & [0047], lines 15-19).

Regarding **claim 22**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 1 and 21). In addition, Carpini et al. disclose the system of claim 21, wherein, the merging network device further comprises:

means (71-Fig. 4, [0054], lines 4-12) for receiving a second message ("restoration", [0047], line 1) along the alternate path in the forward direction; and

means (71-Fig. 4, [0054], lines 4-12) for allowing traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected based on said second message (3, 21-Fig. 1, bi-directional).

Regarding **claim 23**, Carpini et al. substantially disclose a merging network device (9-Fig. 1) comprising:

means (71-Fig. 4, [0054], lines 4-12) for receiving a switch over message (signal, [0047], lines 15-19); and

means (71-Fig. 4, [0054], lines 4-12) for re-routing traffic traveling along a bi-directional LSP in a backwards direction to an alternate path in the backwards direction based on the switch over message (21-Fig. 1, bi-directional).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Regarding **claim 24**, Carpini et al. and Enoki et al. teach everything claimed as applied above (see claim 23). In addition, Carpini et al. disclose the device as in claim 23 further comprising:

means (71-Fig. 4, [0054], lines 4-12) for receiving a second message ("restoration", [0047], line 1) along the alternate path in the forward direction; and

means (71-Fig. 4, [0054], lines 4-12) for allowing traffic to travel along the bi-directional LSP in the backward direction when a failure is no longer detected based on said second message (21-Fig. 1, bi-directional).

Regarding **claim 25**, Carpini et al. substantially disclose a system (Title) for re-routing traffic (Abstract, line 8) comprising:

means (7-Fig. 1) for re-routing traffic traveling along a bi-directional LSP in a forward direction to an alternate path in the forward direction;

means (7, 9, 23-Fig. 1) for transmitting a switch over message (signal, [0047], lines 15-19), along the alternate path in the forward direction, for re-routing traffic traveling along the bi-directional LSP in a backward direction (3, 21-Fig. 1, bi-directional);

means (9-Fig. 1) for receiving the switch over message; and means for re-routing traffic traveling along the bi-directional LSP in a backwards direction to the same alternate path in the backwards direction based on the switch over message (21-Fig. 1, bi-directional).

However, Carpini et al. fail to specifically teach the path is a bi-directional LSP.

Enoki et al. teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

Response to Arguments

4. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's argues that Carpini et al. fail to specifically teach the path is a bi-directional LSP. Enoki et al. (US patent 6,895,008 B2) teach the bi-directional LSP (Fig. 16, and col. 12, lines 15-18). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Carpini et al. with Enoki et al. to obtain the invention as specified, for re-routing traffic in any direction to the alternate path along either uni-directional or bi-directional LSP.

5. Applicant's also argues that the “fault indication signal” is not a “switch over message”. In response, the Examiner respectfully disagrees. The “fault indication

signal" and "switch over message" can be interpreted the same in a broad interpretation. Both will lead to re-routing the traffic.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Z. Russell whose telephone number is (571) 270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR

Seema S. Rao 8/13/07
SEEMA S. RAO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600